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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MAHMOUD SOLIMAN

Appeal 2007-3508
Application 10/064,270
Technology Center 2100

Decided: January 23, 2008

Before HOWARD B. BLANKENSHIP, ST. JOHN COURTENAY III, and
STEPHEN C. SIU, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-7, 10, 11, and 16-18.¹ We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

¹ Claims 1-20 are pending. The Examiner has allowed claims 12-15 and indicated that claims 8, 9, 19, and 20 would be allowable if rewritten in independent form (Final Action 10).

THE INVENTION

The disclosed invention relates generally to calculators. More particularly, Appellant's invention relates to a dedicated tip calculator used to compute the amount of a tip that the user desires to leave after being served with food, getting a cab fare, or in any other circumstance when it is customary to leave a gratuity tip (Spec. 1).

Independent claim 1 is illustrative:

1. A tips calculator, comprising:

a base member having a face side, wherein the face side has:

at least one display screen having a main display area; a plurality of groupings of buttons, wherein:

a first grouping of buttons includes buttons designating whole numbers from 0 to 9 and buttons designating at least mathematical functions of a decimal point, addition, subtraction, multiplication, division, and sum total, whereby the first grouping of buttons is used to at least enter a bill amount, wherein the bill amount is displayed on the main display area;

a second grouping of buttons includes buttons designating tip amounts as percentages of the bill amount and includes a button for a total amount, whereby buttons designating tip amounts are used to enter a choice of a tip amount as a percentage of the bill amount with subsequent display of the tip amount on the main display area, and whereby the button for the total amount is used to obtain a total amount, which is a sum of the bill amount and the tip amount, wherein the total amount is displayed on the main display area;

a third grouping of buttons includes buttons designating numbers of members in a group as whole sequential numbers, whereby buttons designating numbers of members in a group are used to select a number of members in a group and to obtain a display on the main display area of an individual share, wherein the individual share is a product of a division of the total amount by the number of members in a group;

means for performing functions and calculations designated by buttons in the plurality of groupings of buttons;
and

means for display on the display screen of values, functions, and results of calculations designated by buttons in the plurality of groupings of buttons.

THE REFERENCES

The Examiner relies upon the following references as evidence in support of the rejections:

Lipton	US 4,988,025	Jan. 29, 1991
Terriss	US 5,964,823	Oct. 12, 1999
Boston	US 6,076,079	Jun. 13, 2000

Ilium Software, "Tipster," website available at:
<http://www.iliumsoft.com/tipster.htm> ("Ilium").

THE REJECTIONS

Claims 1-7, 10, and 17-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Boston in view of Terriss, and further in view of Ilium.

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Boston in view of Terriss.

Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Boston in view of Terriss, and further in view of Ilium and Lipton.

Rather than repeat the arguments of Appellant or the Examiner, we make reference to the Brief and the Answer for the respective details thereof.

PRINCIPLES OF LAW

“What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007). To be nonobvious, an improvement must be “more than the predictable use of prior art elements according to their established functions.” *Id.* at 1740. Appellant has the burden on appeal to the Board to demonstrate error in the Examiner’s position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) (“On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.”) (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)). Therefore, we look to Appellant’s Brief to show error in the proffered *prima facie* case.

ISSUE(S)

We decide the question of whether Appellant has shown the Examiner erred in holding that the cited combination of prior art would have rendered the claimed subject matter obvious to an artisan having ordinary skill and

common sense at the time of the invention.² More particularly, we have determined the following issues are dispositive in this appeal:

- (1) Whether Appellant has shown the Examiner has failed to articulate an adequate reasoning with a rational underpinning to support the proffered combinability of Boston and Terriss.
- (2) Whether Appellant has shown the Examiner erred in finding that the combination of Boston, Terriss, and Ilium teaches and/or suggests the following limitations:

a button for a total amount . . . whereby the button for the total amount is used to obtain a total amount, which is a sum of the bill amount and the tip amount, wherein the total amount is displayed on the main display area; (Claim 1).

Claims 1-7 and 10

² “[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Moreover, “‘there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’ [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 127 S. Ct. at 1741 (quoting *In re Kahn*, 441 F.3d at 988).

We consider the Examiner's rejection of claims 1-7 and 10 as being unpatentable over the teachings of Boston in view of Terriss, and further in view of Ilium. Since Appellant's arguments with respect to this rejection have treated these claims as a single group which stand or fall together, we will select independent claim 1 as the representative claim for this rejection. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2006).

Combinability under 35 U.S.C. § 103

We decide the question of whether Appellant has shown the Examiner erred by failing to articulate an adequate reasoning with a rational underpinning to support the proffered combinability of Boston and Terriss.

Appellant contends that the Examiner has provided insufficient evidence of motivation to combine the references (App. Br. 11-12). In particular, Appellant contends that Boston "teaches away" from Terriss because Boston discloses that "[a] common calculator, having a wide array of functions and buttons, suffers from being too complicated for most dining patrons to master in a short, single use experience." (Boston, col. 1, ll. 34-38) (App. Br. 12).

The Examiner disagrees. The Examiner contends that the missing function buttons, such as decimal point, addition, subtraction, multiplication, division, and sum total (as found in the secondary Terriss reference), are very common and standard buttons which existed on most of calculators for performing basic mathematical operations (Ans. 14).

Combinability Analysis

“A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994); *see KSR*, 127 S. Ct. at 1739–40 (explaining that when the prior art teaches away from a combination, that combination is more likely to be nonobvious).

Here, we begin our analysis by noting that the portion of Boston relied on by Appellant (as allegedly “teaching away” from Terriss) appears in the background section of the patent to Boston (col. 1, ll. 34-40). After considering the totality of the evidence before us, we find the weight of the evidence supports the Examiner’s position. Because decimal point, addition, subtraction, multiplication, division, and sum total buttons are old elements that are ubiquitous in the calculator art (as taught by Terriss), we do not agree with Appellant that an artisan would have been discouraged from following the path set out in the Terriss reference. We note that in *KSR*, the Supreme Court reaffirmed that “[w]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 127 S. Ct. at 1740 (quoting *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976)).

Because we find a similar rearrangement of old elements here (i.e., an arrangement of calculator buttons), we find unavailing Appellant’s argument

that Boston “teaches away” from the Examiner’s proffered combination with Terriss.

Elements under 35 U.S.C. § 103

We next decide the question of whether Appellant has shown the Examiner erred in finding that the combination of Boston, Terriss, and Ilium teaches and/or suggests the argued limitations of:

a button for a total amount . . . whereby the button for the total amount is used to obtain a total amount, which is a sum of the bill amount and the tip amount, wherein the total amount is displayed on the main display area;

(Claim 1; *see also* App. Br. 12-13).

Appellant contends that Boston and Terriss do not show the claimed feature of a button for calculating a total amount, which is the sum of the bill amount and the tip amount (App. Br. 12-13).

The Examiner disagrees (Ans. 15-16). The Examiner, as finder of fact, has determined that all three references teach and/or suggest the claimed feature of a button for calculating a total amount, which is a sum of the bill amount and the tip amount, as follows:

Regarding the Boston reference, the Examiner notes that “TOTAL” display screen 26 (Figure 2) displays the total amount, which is the sum of the values shown in the “AMOUNT” display screen 20 and the “TIP AMOUNT” display screen 24. Thus, the Examiner finds that any button used to activate “TOTAL” display screen 26 to display the total amount (i.e., the bill plus tip) can reasonably be considered as the total amount button (Ans. 15).

Regarding the secondary Terriss reference, the Examiner finds that the equal “=” button can be used to generate or calculate a total amount which is the sum of the bill amount and the tip amount (Ans. 15).

Regarding the tertiary Ilium reference, the Examiner notes that the total display area (e.g. “32.43 (Total)” on the left figure or “120.00 (Total)” on the right figure) displays the total amount function, which is the sum of the bill amount (\$28.20) and the tip amount (\$4.23). Thus, the Examiner finds that any virtual button used to activate the total display area to display the total amount is a total amount button (Ans. 16).

After considering all of the evidence before us, we conclude Appellant has not shown error in the Examiner’s reasoning. Contrary to Appellant’s arguments, we agree with the Examiner that each of the Boston, Terriss, and Ilium references teaches or at least suggests³ “a button for a total amount . . . whereby the button for the total amount is used to obtain a total amount, which is a sum of the bill amount and the tip amount, wherein the total amount is displayed on the main display area,” as claimed (claim 1).

For at least the aforementioned reasons, we conclude that Appellant has not established that the Examiner erred with respect to establishing a prima facie case of obviousness. Therefore, we sustain the Examiner’s rejection of claim 1 as being unpatentable over the teachings of Boston in view of Terriss, and further in view of Ilium.

³ See *In re Hoeschele*, 406 F.2d 1403, 1406-07 (CCPA 1969) (“[I]t is proper to take into account not only specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom . . .”).

Pursuant to our authority under 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to the remaining claims in this group on the basis of the selected claim alone. Therefore, we sustain the Examiner's rejection of claims 2-7 and 10 as being unpatentable over the teachings of Boston in view of Terriss and Ilium for the same reasons discussed *supra* with respect to representative claim 1.

Dependent claim 11

We consider next the Examiner's rejection of claim 11 as being unpatentable over the teachings of Boston in view of Terriss, and further in view of Ilium and Lipton. Appellant contends that claim 11 is not obvious over the teachings of the cited references for the same reasons previously argued regarding independent claim 1 (*see* App. Br. 13-14). Since we have found *supra* that Appellant has failed to show error in the Examiner's rejection of independent claim 1, we sustain the Examiner's rejection of dependent claim 11 for the same reasons previously discussed regarding claim 1 as being unpatentable over Boston in view of Terriss, and further in view of Ilium.

Independent claim 16

We consider next the Examiner's rejection of independent claim 16 as being unpatentable over the teachings of Boston in view of Terriss.

Appellant restates the "teaching away" argument previously presented with respect to claim 1 (App. Br. 14). Appellant further argues that

independent claim 16 is patentable over the cited prior art on the basis of limitations that are actually recited in dependent claim 17 (App. Br. 14-15).

We have fully addressed Appellant's "teaching away" argument as discussed above with respect to independent claim 1. As pointed out by the Examiner (Ans. 18), the limitations of claim 17 are not found within independent claim 16. Thus, we find Appellant's contentions regarding the limitations of claim 17 to be moot with respect to ascertaining the patentability of independent claim 16. Therefore, we conclude Appellant has failed to show error in the Examiner's rejection of claim 16. Accordingly, we sustain the Examiner's rejection of independent claim 16 as being unpatentable over Boston in view of Terriss.

Dependent claims 17 and 18

We consider next the Examiner's rejection of claims 17 and 18 as being unpatentable over the teachings of Boston in view of Terriss, and further in view of Ilium.

Appellant contends that claims 17 and 18 are nonobvious because they are dependent upon and incorporate the nonobvious method of claim 16 (App. Br. 16).

We have found the method of claim 16 to be obvious, as discussed *supra*. To the extent that Appellant has argued the limitations of claim 17 separately (i.e., in the arguments presented for claim 16), we agree with the Examiner that the Ilium reference teaches and/or suggests the features of claim 17, as described in detail by the Examiner on pages 10, 11, and 19 of the Answer. In particular, we find the up and down arrow buttons shown in

both figures of the Ilium reference reasonably teach and/or suggest the claimed “third grouping of buttons” and the function of entering the number of members in a group, as claimed (claim 17).

Regarding dependent claim 18, Appellant has not presented any substantive arguments directed to the separate patentability of claim 18.⁴ For at least the aforementioned reasons, we conclude Appellant has failed to show error in the Examiner’s rejection of dependent claims 17 and 18. Therefore, we sustain the Examiner’s rejection of these claims as being unpatentable over Boston in view of Terriss and Ilium for the same reasons set forth by the Examiner in the Answer, and as discussed above.

CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that Appellant has not shown the Examiner erred in rejecting claims 1-7, 10, 11, and 16-18 under 35 U.S.C. § 103(a) for obviousness.

⁴ *See In re Young*, 927 F.2d 588, 590 (Fed. Cir. 1991). *See also* 37 C.F.R. § 41.37(c)(1)(vii)(2006).

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DECISION

The decision of the Examiner rejecting claims 1-7, 10, 11, and 16-18 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

pgc

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